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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,403	03/12/2004	Bartley K. Andre	APL1P302/P3262	7320
22434	7590	12/02/2005	EXAMINER	
BEYER WEAVER & THOMAS LLP			GUSHI, ROSS N	
P.O. BOX 70250			ART UNIT	PAPER NUMBER
OAKLAND, CA 94612-0250			2833	

DATE MAILED: 12/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No.	Applicant(s)	
	10/799,403	ANDRE ET AL.	
	Examiner	Art Unit	
	Ross N. Gushi	2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/7/05
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 4-9, 12-19, 21-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4-9, 12-19, 21-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/7/05 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 4-9, 12-19, 21-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Numerous details of the actual structure of the connector have been omitted from the disclosure. As one glaring example, the details of how the redundant contacts would actually be configured are omitted. Applicant states that "the contacts may be configured as a linear array of pins or pad." Specification Col.11, line 1. The drawings cryptically show a split black line leading from the contacts (see figure 5A). It is a mystery whether the contacts would be configured as separate contacts individually

connected to separate power lines (something like how the signal contacts 4,5 in Davis are configured, see Davis figure 7), or whether the contacts would be two pairs of contacts (and two power wires) including bifurcated tines, comparable to those taught by the Davis as power contacts 6, see Davis figure 9, or whether a single power line would be attached to a single contact with 4 tines as suggested by Eichhorn et al ("Eichhorn"). Applicants' cryptic statement that "the contacts may be configured as a linear array of pins or pad" seems to suggest that none of these alternatives are contemplated, but rather some other unknown configuration using "pads" is preferred. The cryptic lines in applicants' figures seem to suggest a split or spliced wire. Another example of critical information that is omitted is that there is no suggestion as to how the contacts are secured to the housing. Are they embedded in the housing, or press fit, or something else. Are wires attached to the contacts? If so, how are the wires attached? If not, how is the connection made. Are the contacts of the receptacle attached to the circuit board? If so, how? If not, how is the connection to the board made? Another example is that applicant claims that the connector allows angled insertion (as shown in figures 2a-2c) "because of the small contact distance D." (spec. par. 00026). Yet the device is clearly shown having parallel longitudinal housing walls that fit snugly together and would preclude any angled insertion (see spec par. 0027 and figures 3a, 3b, 5a, 5b where the clearly angled insertion/extraction is impossible). Likewise the rails and grooves of the connector make angled insertion impossible. The preceding are merely examples of numerous critical details as to which there is no suggestion in the disclosure. Nevertheless, the claims are analyzed on the merits.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 16-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Shi et al. ("Shi") and by Brunker et al. ("Brunker").

Per claims 16-19, Shi discloses mating connectors including mating detents 12' and flexures 114. Regarding the limitation in the that the connector is a "DC" connector, the term is an intended usage limitation and all that is required for the prior art reference structure to read on the claimed structure is that the prior art structure be capable of being used in the claimed manner. R.A.C.C. Industries Inc. v. Stun Tech Inc., 49 USPQ.2d 1793 (Ct. App. Fed. Cir. 1998).

Per claims 16-19, Brunker discloses mating connectors including mating detents and flexures 70 (see e.g. figure 2). Regarding the limitation in the that the connector is a "DC" connector, the term is an intended usage limitation and all that is required for the prior art reference structure to read on the claimed structure is that the prior art structure be capable of being used in the claimed manner. R.A.C.C. Industries Inc. v. Stun Tech Inc., 49 USPQ.2d 1793 (Ct. App. Fed. Cir. 1998).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4-10, 21, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akama et al. ("Akama").

Regarding claims 1, 4, and 5, Akama discloses a connector including an outer shell 514, and an inner electrode disposed within the outer shell, the inner electrode having redundant power contacts that are electrically isolated within the same plane, the redundant power contacts being laterally spaced apart equally relative to a central axis, the outer shell and inner electrode being configured for 0/180 degree connection with a second outer shell and second inner electrode of a second connector along a mating axis (inherently, note vertical and horizontal symmetry of the connector shown clearly in figures 4a, 8a-8c, 13a, etc.). Regarding the limitation in the that the connector is a "DC" connector, the term is an intended usage limitation and all that is required for the prior art reference structure to read on the claimed structure is that the prior art structure be capable of being used in the claimed manner. *R.A.C.C. Industries Inc. v. Stun Tech Inc.*, 49 USPQ.2d 1793 (Ct. App. Fed. Cir. 1998). The Akama device is capable of transmitting direct electrical current. Regarding claims 1 and 4 and the particular dimensions, claimed variations in relative dimensions, which do not specify a device which performs or operates any differently from the prior art, do not patentably

distinguish applicant's invention. Gardner v. TEC Systems, Inc., 725 F.2d 1338 (Ct. App. Fed. Cir. 1984). At the time of the invention, it would have been obvious to vary the Akama axial contact distance as desired and such variations would have been a matter of engineering design choice without patentable significance. Regarding angled insertion and extraction away from the mating axis during the 0/180 connection with the second DC connector, the Akama device is capable of such mating to the same extent that applicant's invention is, in particular the mating connectors may approach each other from an angle prior to complete mating.

Per claim 6, the retention mechanism may be friction.

Regarding claim 7, all of the Akama contacts are capable of transmitting data or power.

Per claim 9, Akama discloses mating shells 514, 524.

Claims 21, 22, and 23 are rejected for the reasons pertaining to claims 1 and 4-9.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shi in view of Brunker. Shi discloses flexures and detents on the longer side of the connectors but not on the shorter sides. Brunker discloses flexures and detents on the shorter side. At the time of the invention, it would have been obvious to include flexures and detents on the shorter side of the Shi connectors as taught in Brunker. Such a modification would have been a matter of engineering design choice, being a rearrangement of parts without patentable significance. See In re In re Harza, 274 F.2d 669 (CCPA 1960).

Claims 7, 8, 9, 12, 13, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inaoka in view of Akama as discussed regarding claims 1 and 4-9. Inaoka discloses mating connectors which inherently may be mated in both 0 and 180 degree orientations (due to the vertical and horizontal symmetry of the connectors). Inaoka does not state whether the number of contacts is odd or even thus whether there is a center contact is unknown. At the time of the invention, it would have been obvious that the number of contacts could be either odd (such that inherently there would be a center contact) or even. The choice would be a mere duplication of parts without patentable significance given that no new or unexpected results would have been produced. In re Harza, 274 F.2d 669 (CCPA 1960). Inaoka does not disclose mating shields. Akama discloses mating shields. At the time of the invention, it would have been obvious to including mating shields on the Inaoka device. The suggestion or motivation for doing so would have been to shield the connector from interference as taught in Akama and as is well known in the art. Regarding the limitation in the that the connector is a "DC" connector, the term is an intended usage limitation and all that is required for the prior art reference structure to read on the claimed structure is that the prior art structure be capable of being used in the claimed manner. R.A.C.C. Industries Inc. v. Stun Tech Inc., 49 USPQ.2d 1793 (Ct. App. Fed. Cir. 1998). Per claims 12 and 13, Inaoka discloses mating grooves and rails. Regarding claim 30, to the extent that Inaoka does not discuss the mounting details Akama discloses wires in the insulating member and posts to mount the shield to the board. At the time of the invention, it would have been obvious to mount the modified device as taught in Akama. The

suggestion or motivation for doing so would have been to properly ground the shield and mount the connector as taught in Akama.

Claims 1, 4, 5, 7, 8, 9, 14, 15, 16, 21, 25, 26, 27, 28, 29, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis U.S. No. 5,295,843 ("Davis '843") in view of Brunker and Shi as discussed regarding claims 16-19. Davis '843 discloses mating connectors inherently matable at 0 and 180 degree orientations (due to the vertical and horizontal symmetry). Davis '843 does not disclose mating shields.

Brunker and Shi disclose well known mating shields including flexures and detents on the shields. At the time of the invention, it would have been obvious to include mating shields (including various flexures and detents) on the Davis connectors as taught in Brunker and Shi. The suggestion or motivation for doing so would have been to prevent interference and properly ground the mating connectors as taught in Brunker and Shi and as is well known in the art (Note that the rectangular shields 11 and 11' can be easily conformed to fit on the Davis '843 connector likewise the Brunker shells 62 and 26 can be easily made to fit the Davis '843 devices. Regarding the limitation in the that the connector is a "DC" connector, the term is an intended usage limitation and all that is required for the prior art reference structure to read on the claimed structure is that the prior art structure be capable of being used in the claimed manner. R.A.C.C.

Industries Inc. v. Stun Tech Inc., 49 USPQ.2d 1793 (Ct. App. Fed. Cir. 1998).

Regarding the particular dimensions, claimed variations in relative dimensions, which do not specify a device which performs or operates any differently from the prior art, do not patentably distinguish applicant's invention. Gardner v. TEC Systems, Inc., 725 F.2d

1338 (Ct. App. Fed. Cir. 1984). At the time of the invention, it would have been obvious to vary the axial contact distance as desired and such variations would have been a matter of engineering design choice without patentable significance. Regarding angled insertion and extraction away from the mating axis during the 0/180 connection with the second DC connector, the devices are capable of such mating to the same extent that applicant's invention is, in particular the mating connectors may approach each other from an angle prior to complete mating. Regarding claim 29, the various devices to which connectors may be connected are well known in the art and at the time of the invention, it would have been obvious to use the mating connectors with various well known devices such as adapters, converters, circuits etc. The suggestion or motivation for doing so would have been to supply power to and from the various devices.

Response to Arguments

Regarding applicant's response to the examiner's arguments, the examiner has considered applicant's arguments but maintains the arguments set out previously. Regarding the 35 USC 112 rejections, applicant's arguments have been fully responded to in the prior two Office actions and the examiner maintains the rejections for the reasons set out in the rejection and the prior two responses to the applicant's arguments. Regarding applicant's arguments regarding the applied prior art, applicant's arguments are moot in view of the new grounds of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ross Gushi whose telephone number is (571) 272-2005. If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor, Paula A. Bradley, can be reached at 571-272-2800 extension 33. The phone number for the Group's facsimile is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ROSS GUSHI
PRIMARY EXAMINER

